

Mammalia, Carnivora, Canidae, *Pseudalopex vetulus* (Lund, 1842): First record for the Atlantic Forest, southern state of Minas Gerais, Brazil

Fernando Afonso Bonillo Fernandes^{1*} and Maurício Djalles Costa²

1 Universidade do Vale do Sapucaí, Departamento de Biologia, Laboratório de Ecologia, Avenida Prefeito Tuany Toledo, 470. CEP 37550-000. Pouso Alegre, MG, Brazil.

2 Rua João Victor de Freitas, 295. CEP 37550-000. Pouso Alegre, MG, Brazil.

* Corresponding author. E-mail: bonillofernandes@uol.com.br

ABSTRACT: We present the first record of *Pseudalopex vetulus* for Pouso Alegre, southern state of Minas Gerais, Brazil. This location is outside the known distribution of the species and also outside the domain of the Cerrado biome, which is usually associated with the geographic distribution of *P. vetulus*.

The hoary fox, *Pseudalopex vetulus* (Lund, 1842), is a small canid, whose body size without the tail ranges between 0.49m and 0.71m, and whose tail measures between 0.25m and 0.38m. Its mass varies between 2.5kg and 4kg (Sillero-Zubiri 2009). The species is endemic to Brazil, occurring in the states of Mato Grosso, Mato Grosso do Sul, Maranhão, Piauí, Tocantins, Goiás, Minas Gerais, Bahia, São Paulo and Paraná (Câmara and Murta 2003; Dalponte and Courtenay 2004). It inhabits areas of Cerrado and neighboring transitional zones, including open and dry environments of the Pantanal region (Dalponte and Courtenay 2004). The diet of *P. vetulus* is omnivorous, consisting mainly of termites, other arthropods, fruits and small vertebrates (Dalponte and Courtenay 2004).

Pseudalopex vetulus is one of the least studied Brazilian canids (Cheida *et al.*, 2006), and available information on the species is insufficient to attribute it with a worldwide threat category (Dalponte and Courtenay 2008). The most critical situation in terms of species conservation is observed in São Paulo, where it is placed in the “Endangered” category of the list of endangered species in the state. In Minas Gerais, the species is considered “Near Threatened” and in Paraná “Data Deficient”, categories that still deserve to be reviewed (Fundação Biodiversitas 2007; Mikich and Bérnills 2004).

To date, the species had not been recorded for the municipality of Pouso Alegre, south of the state of Minas Gerais, and the occurrence of *P. vetulus* was not expected for the region, as shown on the map of geographic distribution of the species presented by Dalponte and Courtenay (2004). According to the vegetation map of IBGE (Brazilian Institute of Geography and Statistics), the municipality of Pouso Alegre (gray area in Figure 1) lies outside the Cerrado biome (checkered area in Figure 1). However, there are small patches of cerrado vegetation scattered throughout the landscape of the municipality, which is dominated by a matrix of anthropogenic fields that also include hundreds of remnants of semideciduous forest, characteristic formations of the Atlantic Forest biome. Small patches of Cerrado vegetation in the region

present phytophysiognomies ranging from *Campo Sujo* to *Cerradao* (Figure 2A and 2B).

Considering all the factors mentioned above, the occurrence of the species in this region of southern Minas Gerais was considered unlikely. However, in April 2009, the first record of *P. vetulus* in Pouso Alegre was confirmed. An individual entered a household property in the urban perimeter of the municipality (22°15'14" S 45°55'14" W). The individual, a female, was captured by the IBAMA (Brazilian Institute of Environment and Renewable Natural Resources) and was released in one of the patches of Cerrado in the municipality (22°15'58" S 45°53'09" W) immediately after being captured (Figure 2D). In December of the same year, two other individuals, probably a couple, were seen in another locality in Pouso Alegre (22°16'22" S, 45°56'26" W), near a Cerrado remnant.

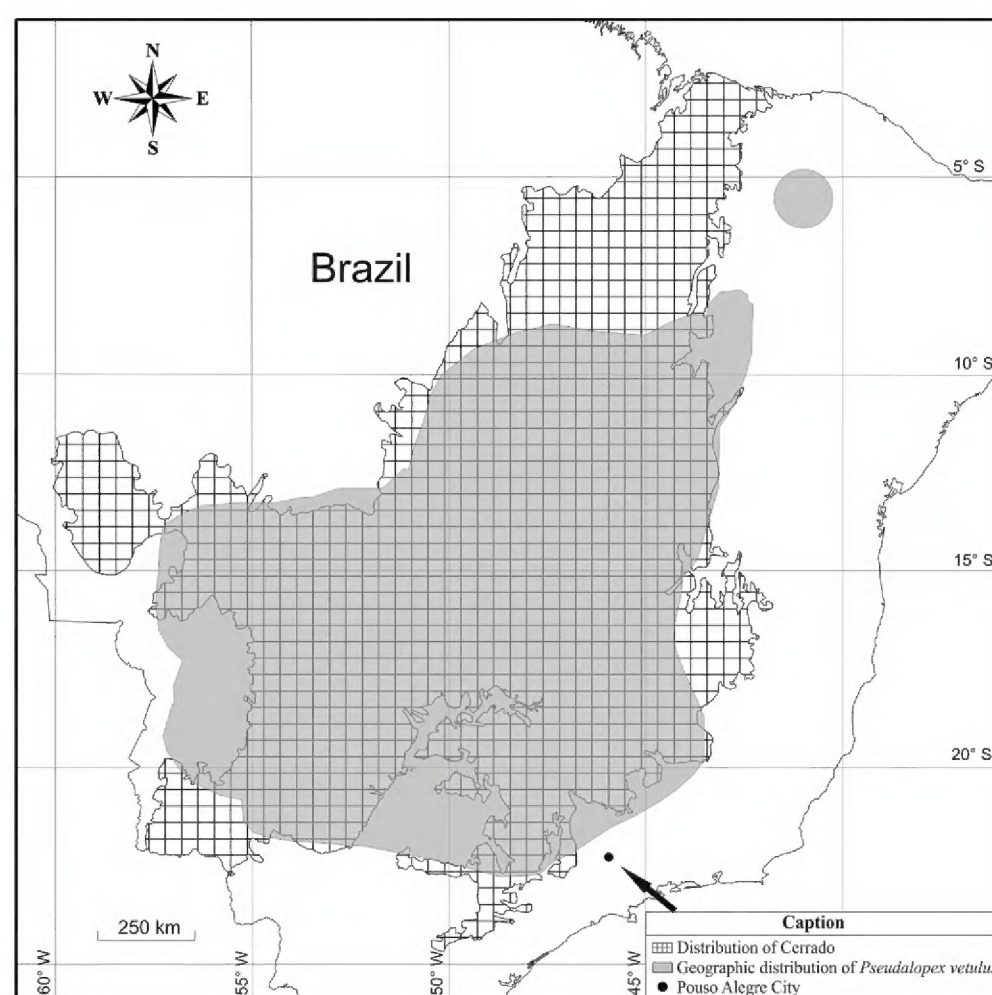


FIGURE 1. Image adapted from the IBGE vegetation map and the map of geographic distribution of *Pseudalopex vetulus* presented in the publication of Dalponte and Courtenay (2004).



FIGURE 2. a) Savanna remnant (campo limpo), b) Cerrado remnant (campo sujo) c) A hoary fox captured in the urban area; d) The individual being released.

The existence of patches of Cerrado in the municipality of Pouso Alegre can be an indication that this biome had a wider distribution in the past than is currently known, or it may be expanding due to the destruction of Atlantic Forest vegetation. Currently, these remnants in the municipality should support several species that are characteristic of this biome, such as the hoary fox. The maned wolf, *Chrysocyon brachyurus* Illiger, 1815, another species of canid with confirmed occurrence for the municipality of Pouso Alegre (Costa *et al.* 2010), must also inhabit these environments.

Considering that the hoary fox is a species that needs attention, because of its “Near Threatened” status in the state of Minas Gerais, and due to the important ecological role that it plays in dispersing seeds and controlling the populations of termites (Coles of Negret and Redford 1982), some of which are harmful to agriculture (Constantine 2002), it is essential to formulate and implement measures aimed at preserving the remnants of Cerrado that persist in the region. These are emergency measures, since Pouso Alegre lives a time of great growth, where real estate speculation and the expansion of industry are exerting strong pressure on the last natural habitats of the municipality and, consequently, on the biodiversity of this ecosystem.

LITERATURE CITED

- Câmara, T. and R. Murta. 2003. *Mamíferos da Serra do Cipó*. Belo Horizonte: Editora PUC-Minas/Museu de Ciências Naturais. 129 p.
- Coles de Negret, H.R. and K.H. Redford. 1982. The biology of nine termite species (Isoptera: Termitidae) from the Cerrado of Central Brazil. *Psyche* 89: 81-106.
- Constantino, R. 2002. The pest termites of South America: taxonomy, distribution and status. *Journal of Applied Entomology* 126(7-8): 355-365).
- Costa, M.D., F.A. Bonillo-Fernandes and D.H.S. Viana. 2010. Levantamento da mastofauna de médio e grande porte em fragmento de Mata Atlântica, Pouso Alegre, MG. *Revista Brasileira de Zoociências* 12(3): 281-290.
- Dalponete, J.C. 1997. Diet of the hoary Fox, *Lycalopex vetulus*, in Mato Grosso, Central Brazil. *Mammalia* 61(4): 537-546.
- Dalponete, J. and O. Courtenay. 2004. Hoary Fox *Pseudalopex vetulus* (Lund, 1842); p. 72-75 In C. Sillero-Zubiri, M. Hoffman, and D.W. MacDonald (ed.). *Canids: Foxes, Wolves, Jackals and Dogs. Status, Survey and Conservation Action Plan*. Gland and Cambridge: IUCN/SSC Canid Specialist Group.
- Fundação Biodiversitas, 2007. *Revisão das Listas das Espécies da Flora e da Fauna Ameaçadas de Extinção do Estado de Minas Gerais. Relatório Final. Vol 1*. Belo Horizonte. Fundação Biodiversitas. 142 p.
- Mikich, S.B. and R.S. Bérnils. (ed.). 2004. *Livro vermelho da fauna ameaçada no Estado do Paraná*. Curitiba: Instituto Ambiental do Paraná. 763 p.
- Sillero-Zubiri, C. 2009. The Canidae; p. XX-XX In D.E. Wilson and R.A. Mittermeier (ed.) 2009. *Handbook of the Mammals of the World. Vol. 1. Carnivores*. Barcelona: Lynx Ediciones.
- Dalponete, J. and O. Courtenay. 2008. *Pseudalopex vetulus*. In IUCN 2012. *IUCN Red List of Threatened Species. Version 2012.1*. Electronic database accessible at www.iucnredlist.org. Captured on 12 October 2012.

RECEIVED: August 2012

ACCEPTED: June 2013

PUBLISHED ONLINE: December 2013

EDITORIAL RESPONSIBILITY: Fabio Oliveira do Nascimento